

Abstract

This invention provides a bending mechanism that performs a ± 90 degrees bending motion per degree of freedom (DOF) simply by directly sliding a pair of a multi-slider linkage mechanisms and enables multi-degree-of-freedom (MDOF) bending by combining two or more said bending mechanisms. To serve the purpose, the first frame 1, the second frame 3 and the third frame 5 are linearly arrayed and sequentially mounted to be rotatable about the first and the second rotating shafts 2 and 4, respectively. The first drive link 7, the second drive link 9 and the third drive link 12 are connected to the first frame 1 on the right side of the first rotary shaft 2. The first restraining link 15 and the second restraining link 17 are connected to the first frame 1 on the left side of the first rotary shaft 2. The first frame 1 turns right and left as the third drive link 12 is driven and slides.